

**APPENDIX OF UNPUBLISHED CASES
TO DEFENDANTS' BRIEF IN OPPOSITION TO
ALAGASCO'S MOTION TO LIMIT
THE EXPERT TESTIMONY OF KATHLEEN J. ROBISON**

Diocese of St. Petersburg, Inc. v. Safety Nat'l Cas. Corp.,
2009 WL 2602451 (M.D. Fla.)

Inam Intern., Inc. v. Broan-Nutone LLC,
2007 WL 4730649 at *4 (N.D. Ga. Sept. 21, 2007)

Diocese of St. Petersburg, Inc. v. Safety Nat'l Cas. Corp.,
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Only the Westlaw citation is currently available.

United States District Court, M.D. Florida,
Tampa Division.
DIOCESE OF SAINT PETERSBURG, INC., a Florida non-profit corporation, Plaintiff,
v.
SAFETY NATIONAL CASUALTY CORPORATION, a Missouri corporation, and ESIS, INC., a Pennsylvania corporation, Defendants.

No. 8:08-cv-950-T-30TBM.
Aug. 25, 2009.

David W. Adams, Zachary J. Glaser, Sponsler, Bennett, Jacobs & Adams, PA, Tampa, FL, for Plaintiff.

Wayne E. S. Johnson, Deciccio & Johnson, Winter Park, FL, Steven D. Lehner, Hinshaw & Culbertson, LLP, Tampa, FL, for Defendants.

ORDER

THOMAS B. McCOUN, United States Magistrate Judge.

*1 THIS MATTER is before the court on **Plaintiff's Motion to Strike Defendant's Expert, Nancy L. Cavey or, in the alternative, Motion for Extension of Time to Disclose Rebuttal Witness** (Doc. 53) and Defendant Safety National Casualty Corporation's Response (Doc. 57). Plaintiff files its motion pursuant to Rule 702, Fed.R.Evid. and *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 113 S.Ct. 2786, 125 L.Ed.2d 469 (1993), seeking an order striking Nancy L. Cavey ("Cavey") as an expert for the defense on the basis that: (1) Cavey is not qualified to testify as an expert in the field of workers' compensation defense; (2) she applies no sufficiently reliable methodology to reach her conclusions; and (3) her testimony will be duplicative and will not assist the jury in any appreciable manner. Alternatively, Plaintiff seeks an extension of time to disclose a rebuttal expert witness. ^{FN1}

^{FN1} By way of procedural background, the Plaintiff's expert disclosure was originally

due May 11, 2009, and Defendants' expert disclosure deadline was June 1, 2009 pursuant to the Court's Case Management and Scheduling Order (Doc. 28). The parties sought extensions of time as to expert disclosure and discovery. *See* (Docs.38, 41). Orders were entered granting an extension of the expert discovery to July 15, 2009 (Doc. 39) and extending the expert disclosure deadlines for the Plaintiff to June 5, 2009 and Defendant to June 19, 2009 (Doc. 42). Thereafter, the court granted Defendant's request for an extension of time from June 19 to June 22, 2009, in which to provide its expert's (Nancy L. Cavey) report. (Doc. 49).

More particularly, Plaintiff seeks to strike Cavey as an expert witness for the defense on the basis that she is primarily a plaintiff/claimant's disability and workers' compensation attorney, and therefore lacks the qualifications and expertise to serve as an expert on the handling of the defense of a workers' compensation claim. Plaintiff submits that a review of Cavey's publications reveals that her specialty is in representing claimants and plaintiffs, and not in defending workers' compensation claims. Notwithstanding, her report in this case indicates that she intends to offer expert testimony on the handling, litigation, defense, analysis, and settlement of workers' compensation claims. Plaintiff urges that Defendant fails to meet its burden of establishing that Cavey is qualified to testify as to the proper handling of the *defense* of these claims. Nor can Defendant meet its burden to establish the reliability of Cavey's testimony. Here, Cavey seeks to testify as an expert based solely on her experience as a claimant's attorney. Thus, Plaintiff urges that, at the very least, she must explain how her experience leads her to the conclusions reached. ^{FN2} In essence, it argues that Cavey's opinions amount to "Monday-morning quarterbacking" unsubstantiated by any reliable methodology capable of replication, testing, or peer review, and thus are inadmissible under Rule 702. Lastly, Plaintiff argues that Cavey's testimony will be duplicative of testimony which will be presented by witnesses (including claims analysts, attorneys, and the Director of Risk Management) with personal knowledge of the claims file. Plaintiff urges that based on these witnesses' testimony, the jury will

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be capable of understanding the testimony and deciding the issues without the necessity of expert testimony from Cavey which will merely be a recap of the testimony presented by these other competent witnesses who collectively have in excess of twenty years of experience evaluating and adjusting workers' compensation claims.^{FN3} (Doc. 53)

^{FN2}. Plaintiff cites *Lord v. Fairway Electric Corp.*, 223 F.Supp.2d 1270 (M.D.Fla.2002) (quoting *Fed.R.Evid. 702* Advisory Committee's Note) in support.

^{FN3}. In support, Plaintiff cites *U.S. v. Frazier*, 387 F.3d 1244, 1262-63 (11th Cir.2004) (citing *Weinstein's Federal Evidence* § 702.03[2] [a]).

In response, Defendant urges that the motion should be denied because Cavey is qualified to offer expert testimony in this matter, pointing to her AV-rating by Martindale-Hubbell, her twenty-nine years practicing workers' compensation law in Florida, and her board certification in this area since 1991. Defendant submits that it timely disclosed Cavey, and Plaintiff had the opportunity to depose her prior to the expert discovery deadline to challenge her qualifications, but chose not to. Had Plaintiff deposed her, it would have learned that she has represented employers, self-insureds, and insurance carriers, in addition to representing claimants. Notwithstanding, Cavey's experience as a claimant's attorney does not disqualify her from being able to testify about the proper defense of a claim. On the contrary, Defendant urges that her experiences as a claimant's attorney makes her knowledgeable about the best way to maximize lifetime benefits for an injured worker and the best actions the defense can take to mitigate or minimize such benefits. Additionally, a claimant's lawyer would know the appropriate settlement value of a case, as well as customary practices regarding settlement offers in workers' compensation claims. Defendant urges that courts clearly allow lawyers to offer expert testimony in insurance coverage cases on issues of custom, practice, value, settlement, and defense of claims.^{FN4} In response to Plaintiff's arguments that her opinions will not offer anything to assist the jury, Defendant contends that Cavey will be able to discuss topics beyond the jury's sophistication including customary practices and patterns in regard to workers' compensation claims, as well as mitigating exposure

on claims and reasonable settlement values. As to Plaintiff's position that Cavey applies no reliable methodology in reaching her conclusions, Defendant submits that the Eleventh Circuit rejected such argument in the context of nonscientific expert testimony, such as insurance matters, where such testimony was based on the expert's thirty years of experience.^{FN5} Further, Defendant argues that Cavey's testimony will not be duplicative of another expert and Plaintiff's position that her testimony will be covered by the Defendant's corporate representative is not a proper basis for striking an expert's testimony. (Doc. 57).

^{FN4}. Defendant cites *Peckham v. Continental Casualty Insurance*, 895 F.2d 830 (1st Cir.1990) and *Menendez v. Unitrin*, 8:06-cv-563-T-24MAP, 2007 WL 2696795 (M.D.Fla. Sept.12, 2007) in support.

^{FN5}. See *American Gen. Life Ins. Co. v. Schoenthal Family, LLC*, 555 F.3d 1331, 1338 (11th Cir.2009); *Jablonski v. St. Paul Fire and Marine*, 2:07-cv-386-FtM-29SPC, 2007 WL 113386 (M.D.Fla. Jan. 16, 2009).

^{*2} Rule 702 of the Federal Rules of Evidence governs the admissibility of expert testimony: [i]f scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case. Simply stated, the trial court can admit relevant expert testimony only if it finds that: (1) the expert is qualified to testify about the matters he intends to address; (2) the methodology used by the expert to reach his conclusions is sufficiently reliable; and (3) the expert's testimony will assist the trier of fact, through the application of scientific, technical, or specialized expertise, to understand the evidence or determine a fact in issue. *McCorvey v. Baxter Healthcare Corp.*, 298 F.3d 1253, 1257 (11th Cir.2002). The party offering the expert bears the burden of establishing qualification, reliability and helpfulness. *Cook ex rel. Estate of Tessier v. Sheriff of Monroe County, Fla.*, 402 F.3d 1092, 1107 (11th Cir.2005); *United States v. Frazier*, 387 F.3d 1244,

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1260 (11th Cir.2004).

As indicated above, whether the individual offering the evidence is qualified as an expert in the field in which he is offering an opinion is a threshold determination in deciding whether scientific evidence is admissible. *See Tuscaloosa v. Haveros Chem., Inc.*, 158 F.3d 548, 562 (11th Cir.1998). Under the plain language of Rule 702, an expert may be qualified through training or education, as well as through experience.^{FN6} *United States v. Frazier*, 387 F.3d 1244, 1261 (11th Cir.2004) (en banc). The expert's qualifications, however, must relate to the matters he will address in his testimony. *See Allison v. McGahn Med. Corp.*, 184 F.3d 1300, 1309 (11th Cir.1999).

FN6. A witness who possesses general knowledge of a subject may qualify as an expert despite lacking specialized training or experience, so long as his testimony would likely assist a trier of fact. *See United States v. Hensel*, 711 F.2d 1000, 1006 (11th Cir.1983); *Maiz v. Virani*, 253 F.3d 641, 665 (11th Cir.2001).

This Circuit has recognized that, "standards of scientific reliability, such as testability and peer review, do not apply to all forms of expert testimony." *American General Life Ins. Co. v. Schoenthal Family LLC*, 555 F.3d 1331, 1338 (11th Cir.2009) (quoting *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 151, 119 S.Ct. 1167, 143 L.Ed.2d 238 (1999)). Thus, where the expert testimony is of a nonscientific nature, as in the instant matter, a court may determine the reliability of that nonscientific testimony "based 'upon personal knowledge or experience.'" *Id.* (quoting *Kumho Tire*, 526 U.S. at 150). To that end, a trial judge is given "considerable leeway in deciding in a particular case how to go about determining whether particular expert testimony is reliable." *Id.* at 152.

Lastly, the expert testimony must assist the trier of fact. Expert testimony assists the trier of fact "if it concerns matters that are beyond the understanding of the average lay person." *Frazier*, 387 F.3d at 1262. "[E]xpert testimony generally will not help the trier of fact when it offers nothing more than what lawyers for the parties can argue in closing arguments." *Id.* Nor does expert testimony help the trier of fact if it fails to "fit" with the facts of the case. *McDowell*, 392 F.3d at 1299. Expert testimony lacks "fit" when "a large an-

alytical leap must be made between the facts and the opinion." *See id.* (citing *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 118 S.Ct. 512, 139 L.Ed.2d 508 (1997)). Thus, the court may exclude otherwise reliable testimony if there is too great an analytical gap between the data and the opinion proffered and/or if it does not have sufficient bearing on the issue at hand to warrant a finding that it would be helpful to the trier of fact. *See Joiner*, 522 U.S. at 147.

*3 Upon careful consideration, Plaintiff's Motion to Strike Defendant's Expert, Nancy L. Cavey or, in the alternative, Motion for Extension of Time to Disclose Rebuttal Witness (Doc. 53) is **denied**. Cavey's curriculum vitae reveals that she received her law degree in 1980 from William Mitchell College of Law in St. Paul, Minnesota, and since that time has practiced in the areas of workers' compensation, social security law, and wage and hour claims. (Doc. 53-3 at 1). She was Chair of the Workers' Compensation Section of the Florida Bar in 2004. She is a member of the National Organization of Social Security Representatives, the American Justice Association, the American Bar Association, the Florida Bar, and the National Employment Lawyers Association. She has authored numerous publications in the areas of long-term disability ERISA and private disability insurance claims, Social Security claims and appeals, and Florida workers' compensation benefits. *Id.* at 2-4. I find Cavey's twenty-nine years of experience in the area of workers' compensation, in addition to her board certification in this area, qualify her to render expert opinions and testimony which may be helpful to the jury in this matter. By my consideration, the fact that her experience may be more on the side of claimants/plaintiffs as opposed to the defense does not disqualify her as an expert in this area. As for reliability, on this motion there is no demonstration that her opinions on the value of the claim or Plaintiff's handling of this claim are unreliable. On the contrary, her report sets forth plausible reasons from the documents produced and reviewed to support her opinions. Further, this Circuit has accepted the reliability of nonscientific expert testimony in the area of insurance matters based upon an expert's education and experience where the court finds the expert to have ample knowledge and experience about the subject. *See Amer. Gen. Life Ins. Co.*, 555 F.3d at 1338. As noted above, I find Cavey's education, work experience, authorship, and committee involvement in the area of workers' compensation qualify her to testify on this subject matter and furthermore satisfy the relia-

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bility component. At this stage of the proceedings, it appears that expert testimony concerning the workers' compensation claims standards and practices in Florida and the Plaintiff's handling of this claim may be helpful to the jury. While the trial judge will no doubt determine the appropriate scope of such testimony, consideration of this factor is no cause to strike this testimony at this juncture.

As to Plaintiff's alternative request for an extension of time to disclose a rebuttal expert, it appears that the court has previously granted the parties additional time within which to identify experts. Plaintiff apparently chose not to do so. No good cause for a further extension of time to name an expert is set forth in the motion.

Done and Ordered.

M.D.Fla.,2009.
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END OF DOCUMENT

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United States District Court,
N.D. Georgia,
Atlanta Division.
INAM INTERNATIONAL, INC., Plaintiff,
v.
BROAN-NUTONE LLC, Defendant.

Civil Action No. 1:05-CV-0852-CAP.
Sept. 21, 2007.

Named Expert: Prof. Thomas Eagar, SC.D., P.E.,
Richard I. Underwood, P.E.

Jefferson Cary McConnaughey, Michael A. McKenzie,
Cozen & O'Connor, Atlanta, GA, for Plaintiff.

Alexia Ruffner Roney, Charles R. Carson, George R. Neuhauser, Mark Daniel Lefkow,
Nall & Miller, LLP,
Atlanta, GA, for Defendant.

ORDER

CHARLES A. PANNELL, JR., District Judge.

*1 This matter is now before the court on the defendant's motion to exclude certain expert testimony [Doc. Nos. 48 and 49] and the defendant's motion for summary judgment [Doc. No 43].

Factual Background

On March 10, 2003, a fire occurred in a convenience store owned by the plaintiff. The plaintiff filed this civil action alleging that the fire was caused by defects in the motor of the bathroom exhaust fan manufactured by the defendant. Specifically, the plaintiff sets forth causes of action for negligent design, negligent manufacture, and a breach of duty to warn [Doc. No. 1]. The bathroom exhaust fan at issue in this case is a Nutone model 763. The fan consists of a fan motor housing (a metal box) with a fan motor mounted within. The fan motor is manufactured by Jakel, Inc., who is not a party in the instant action. The motor consists of an iron core (called an armature), aluminum windings, and a bearing and axle. The fan motor operates when the aluminum windings are energized with electricity which creates an electro-

magnetic field that causes the rotor and shaft to turn within the bearing, turning the blades of the fan. The turning fan blades create a vacuum within the fan motor housing that draws air out of the room and exhausts it to another location. The windings, which are wrapped around a plastic bobbin, consist of one long strand of wire on which an insulation of polyurethane has been coated. Insulation on the windings prevents electrical current from transferring to adjacent strands of wire on the winding.

The motor also has a thermal cut off protector ("TCO") installed within the electrical circuit of the fan motor, which is designed to act as a temperature sensitive fuse. The TCO is designed to cut electrical power to the motor when the temperature within the fan reaches approximately 136° C. The purpose of the TCO is to prevent the fan from overheating and starting a fire.

The plaintiff contends that the insulation used on the windings in the motor degraded over time, and as a result of the degradation of insulation, smaller portions of the coil became isolated from the rest of the coil. This isolation resulted in induction of current in the smaller portion of the coil by the larger portion, termed "the transformer effect," leading to localized heating of the smaller portion of the coil. The increased heating caused by the transformer effect reached levels that ignited adjacent combustibles, resulting in the fire.

The plaintiff alleges that two defects in the design of the fan motor resulted in the motor overheating and igniting nearby combustible materials. First, the plaintiff contends that insulation on the winding was inadequately designed to withstand the operating temperatures within the fan motor, thereby causing the degradation of the insulation and the subsequent transformer effect. Second, the plaintiff contends that the TCO installed on the motor to cut power to the motor in case it overheated was improperly located and/or improperly rated, resulting in its failure to pick up the increased heat secondary to the alleged transformer effect.

*2 The plaintiff alleges that: 1) the defendant was negligent when it designed and manufactured an ex-

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haust fan assembly that would fail by overheating, creating a fire within the fan, which could and would foreseeably spread to other adjacent combustible materials; 2) the defendant was negligent when it designed and manufactured an exhaust fan assembly that contained a safety device inadequate to prevent the dangerous overheating that accompanied failure of the product; 3) the defendant was negligent when it failed to warn of the risk of fire associated with the normal and intended use of its product; and, 4) the defendant was negligent when it acquired knowledge, which demonstrated the existence of a significant risk of fire associated with the failure of the type of exhaust fan at issue, but failed to provide meaningful warnings to consumers and users of the product concerning such risk [Doc. No. 1, at ¶ 16].

The defendant contends that it is entitled to summary judgment on three bases. First, the defendant contends that the plaintiff's proposed experts' testimony should be excluded because it is unreliable [Doc. No. 43, Ex. 6, at 6]. Accordingly, the defendant contends that no evidence exists that the exhaust fan is defective without the testimony of the plaintiff's proposed experts. *Id.* Second, the defendant contends that the plaintiff cannot prove that the design defect was the cause of the fire in light of testimony by Dashruthbhai Patel, a store employee who witnessed the fire. *See id.* at 7. According to the defendant, Patel testified that the fan was operating when he first witnessed smoke from the fire. If true, the defendant maintains, then the plaintiff's experts' theories as to the cause of the fire would be "unlikely" and not consistent with Patel's testimony. *Id.* Finally, the defendant contends that the plaintiff cannot demonstrate that the risk of fire, as it alleges the fire to have occurred, was foreseeable because there is no evidence that the defendant was aware, constructively or otherwise, that its design might foreseeably cause a fire in the manner alleged by the plaintiff. *Id.* at 7.

Legal Analysis

A. Motion to Exclude the Plaintiff's Experts' Testimony

In support of its product liability claims, the plaintiff seeks to present the expert testimony of Thomas Eagar and Richard I. Underwood. Thomas Eagar, Sc.D., P.E., is a professor of Materials Engineering at the Massachusetts Institute of Technology (MIT) who states that the fan motor failed due to shorting of coil windings on the inner surface of the

coil, resulting in the fire in the motor [Doc. No. 48, Ex. 6, at 4]. He opines that the insulation on the windings was defective as it did not prevent shorting between the windings. *Id.* He further opines that the TCO was not placed correctly to protect against overheating due to shorted coils [Doc. No. 48, Ex. 7, at 7].

Richard I. Underwood, P.E., is an electrical engineer who states in his expert report that the Nutone Model 763 fan caused the plaintiff's fire through a malfunction of the fan motor when the motor windings shorted out as a result of motor overheating and the subsequent ignition of adjacent combustibles. Underwood opines that the product was defective in the design of the placement of the TCO, which should have been located in a better place to prevent the overheating [Doc. No. 48, Exs. 9 and 11].

*3 The defendant contends that neither Eagar's nor Underwood's opinions are sufficiently reliable to meet the standards of admissibility set forth in Rule 702 of the Federal Rules of Evidence and by the United States Supreme Court in Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579, 113 S.Ct. 2786, 125 L.Ed.2d 469 (1993). On August 31, 2007, this court held a hearing to determine the admissibility of the plaintiff's experts' testimony.

1. The Daubert/Kumho standard

The district court is obligated to act as a gatekeeper to the admission of expert testimony by ensuring that it "both rests on a reliable foundation and is relevant to the task at hand." Daubert, 509 U.S. at 597. The proponent of expert testimony bears the burden of demonstrating that the expert "is qualified to render an expert opinion, that the opinion is reliable, and that the opinion would assist the trier of fact in resolving a disputed issue of material fact." McDowell v. Brown, 392 F.3d 1283, 1298 (11th Cir.2004).

Determinations regarding the admissibility of such testimony are controlled by Federal Rule of Evidence 702, as explained by the Supreme Court in Daubert and its progeny. City of Tuscaloosa v. Harcross Chemicals, Inc., 158 F.3d 548, 562 (11th Cir.1998). *See also Fed.R.Evid. 702* ("If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or

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otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.”); *Daubert*, 509 U.S. at 585-97.

Under these rules, the district court generally engages in a three-part inquiry to determine the admissibility of expert testimony. Specifically, the court considers whether (1) the expert is qualified to testify competently regarding the matters he intends to address, (2) the methodology by which the expert reaches his conclusions is sufficiently reliable as determined by the sort of inquiry mandated in *Daubert*, and (3) the testimony assists the trier of fact, through the application of scientific, technical, or specialized expertise, to understand the evidence or to determine a fact in issue. *Quiet Technology DC-8, Inc. v. Hurel-Dubois UK Ltd.*, 326 F.3d 1333, 1340-41 (11th Cir.2003). The same standard applies to all expert testimony, including testimony regarding scientific, technical, and other specialized matters. *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 147, 119 S.Ct. 1167, 143 L.Ed.2d 238 (1999).

The Supreme Court has warned, however, that “the factors identified in *Daubert* may or may not be pertinent in assessing reliability, depending on the nature of the issue, the expert's particular expertise, and the subject of his testimony.” *Kumho*, 526 U.S. at 151. In fact, with regards to expert testimony other than “scientific” testimony, the Supreme Court has held, “the relevant reliability concerns may focus upon personal knowledge or experience.” *Id.* at 150.

*4 In the end, it is not the role of the district court to make ultimate conclusions as to the persuasiveness of the proffered evidence. *Quiet Technology*, 326 F.3d at 1341. Indeed, a district court's gatekeeper role is not intended to supplant the adversary system or the role of the jury. *Id.* Quite the contrary, vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence. *Id.* The “overarching” goal of *Daubert*'s gatekeeping requirement is simply to make certain that an expert, whether basing testimony upon professional studies or personal experience, employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field. *Kumho Tire Co.*, 526 U.S. at 152.

2. Application of the Daubert Standard

a. Thomas Eagar

i. Qualifications

To testify as an expert, the expert must be “competent and qualified by knowledge, skill, experience, training, or education to render the opinion.” *Siharath v. Sandoz Pharmaceutical Corp.*, 131 F.Supp.2d 1347, 1351 (N.D.Ga.2001), *aff'd sub nom. Rider v. Sandoz Pharmaceutical Corp.*, 295 F.3d 1194 (11th Cir.2002). “It is not necessary that the witness be recognized as a leading authority in the field in question.... Gaps in an expert witness's qualifications or knowledge generally go to the weight of the witness's testimony not its admissibility. Thus, *Rule 702* takes a liberal approach to expert witness qualification.” *Leathers v. Pfizer, Inc.*, 233 F.R.D. 687, 692 (N.D.Ga.2006) (citing 29 CHARLES ALAN WRIGHT & VICTOR JAMES GOLD, *FEDERAL PRACTICE AND PROCEDURE: EVIDENCE* § 6265 (West 1997)).

Thomas Eagar received a Sc.D. from Massachusetts Institute of Technology (MIT) in Metallurgy in 1975. Eagar is currently a Professor of Materials Engineering and a Professor of Materials Engineering and Engineering Systems at MIT. Eagar has published over 200 papers in his field, and has received a number of awards and distinctions. At the August 31, 2007, hearing, Eagar testified that he specializes in manufacturing, welding, and electrical arc physics. The court finds Eagar qualified to render an opinion in this case based on Eagar's technical expertise.

ii. The Methodology by which the Expert Reaches his Conclusions

In *Daubert*, the Court recognized that a determination of admissibility of scientific evidence was a flexible inquiry, and that many factors will bear on it, including: 1) whether the method used is testable or has been tested; 2) whether the method or theory has been subject to peer review or publication; 3) whether the method has a known or potential rate of error; and 4) whether the method has achieved general or widespread acceptance. *Daubert*, 509 U.S. at 593-94. The Court has made clear, however, that this list is neither definitive nor exhaustive and that a trial judge has wide discretion both in deciding how to assess an

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expert's reliability and in making a determination of that reliability. *Kumho Tire Co.*, 526 U.S. at 150, 152-53. While these factors are most relevant in the context of a new and novel scientific theory-asking if it has been tested, subjected to peer review and publication, etc.-they do provide examples of the general kinds of issues a trial court need probe in light of its purpose of ensuring that an expert "employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field." *Kumho Tire Co.*, 526 U.S. at 152. Failure to consider one, or even any, of these factors, albeit suggestive, will not be dispositive of a district court's failure to fulfill its gatekeeping role because that role depends on the underlying factual circumstances of the particular case. *Bitler v. A.O. Smith Corp.*, 400 F.3d 1227, 1233 (10th Cir.2004).

*5 While the *Daubert* focus should be on the methodology used to arrive at the expert's conclusion, methodology and conclusions are not entirely distinct from one another. See *General Electric v. Joiner*, 522 U.S. 136, 146, 118 S.Ct. 512, 139 L.Ed.2d 508 (1997). Trained experts commonly extrapolate from existing data. But nothing in either *Daubert* or the Federal Rules of Evidence requires a district court to admit opinion evidence which is connected to existing data only by the ipse dixit of the expert. A court may conclude that there is simply too great an analytical gap between the data and the opinion proffered. *Id.*

The defendant contends that Eagar's testimony is unreliable for a number of reasons. In short, the defendant contends that Eagar used an unreliable methodology and improperly extrapolated data generated from tests that do not relate to the particular fan at issue under its operating conditions to reach his conclusions. Specifically, the defendant contends that Eagar did not test the insulation used on the windings to determine at what temperature it stopped functioning or whether a fan could ignite by degrading the insulation. The defendant also contends that Eagar never caused a motor to ignite without tripping the TCO. In addition, the defendant contends that Eagar has never demonstrated that a fan manufactured by the defendant, operating as it would have in a real world setting, would fail as Eagar alleges. Instead of real world testing of the actual type of fan at issue, the defendant argues that Eagar used tests that are substantively flawed, not peer reviewed, have no known rate of error when applied to the fan at issue, and only

tenuously support his conclusions. Finally, the defendant maintains that Eagar's theory as to the cause of fire is not possible given the testimony of store employee Patel, who has stated that the fan was still blowing after the fire had started.

Eagar has produced two expert witness reports dated March 27, 2006 [Doc. No. 48, Ex. 6], and December 27, 2006 [Doc. No. 48, Ex. 7], respectively. The crux of Eagar's testimony is that the fan motor failed due to shorting of coil windings on the inner surface of the coil, which was not prevented because the insulation on the winding was inadequately designed to withstand operating temperatures within the fan motor, thereby causing the degradation of the insulation and the subsequent shorting of the coil. According to Eagar, the shorting of the coil resulted in internal heat intensities that ignited nearby combustible fan parts [Doc. No. 48, Ex. 6, at 4]. In addition, the insulation on the winding was not compatible with the TCO because the insulation was rated for use up to 130° C, while the TCO cutoff was 136° C [Doc. No. 48, Ex. 7, at 7]. Eagar testified that this temperature setting difference allowed the fan to operate at temperatures that exceeded the rating of the insulation, which eventually degraded.^{FN1} Finally, according to Eagar, the misplacement of the TCO allowed the shorted winding coil to reach an internal non-uniform heat intensity sufficient to ignite combustibles before the tripping of the TCO. See *id.*

^{FN1} Eagar testified at the hearing that insulation loses mechanical strength at temperatures above its temperature classification rating, subjecting it to being shaken or rubbed off if the motor vibrates.

*6 Eagar testified at the August 31, 2007, hearing that the methodology he used to reach his conclusions was guided by the fire investigation procedures outlined in the National Fire Protection Agency fire investigation manual-NFPA 921, GUIDE FOR FIRE AND EXPLOSION INVESTIGATIONS (2004).^{FN2} A review of Eagar's expert reports and testimony at the August 31, 2007, hearing indicates that the methodology used to reach his conclusions in the instant case consisted of: 1) reviewing photographs and physical evidence of the plaintiff's fan; 2) reviewing burn patterns from exemplary fans that had been in fires, including burn patterns generated during laboratory testing; 3) reviewing burn patterns from exemplary

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fans that had overheated, including the Morrill fan; 4) reviewing burn patterns and defects in different types of fans observed in the field; 5) reviewing data derived from tests that demonstrate known scientific principles applicable to small exhaust fan motors, and 6) applying knowledge obtained from steps 1)-5) to reach his conclusions.

FN2. NFPA 921, Chapter 4 describes the basic methodology used to investigate the cause of a fire. According to the manual, a fire investigator should utilize a systemic approach to investigate the cause of a fire using the scientific method. The scientific method provides for collecting data from the fire, analyzing the data, developing a hypothesis as to the cause of the fire, testing the hypothesis, and deriving a conclusion based on the hypothesis.

Eagar concludes that the burn patterns on the plaintiff's fan were consistent with a fire originating within the motor coil, in particular a fire with an electrical origin, and inconsistent with damage caused by a fire of external origin [Doc. No. 48, Ex. 7, at 6]. He based this conclusion on a comparison of the plaintiff's fan's burn patterns with calculated heat intensities required to induce such burn patterns. The heat intensity calculations were developed using a thermal conductivity analysis of an aluminum fan coil ("aluminum coil heat conduction test") and Fourier's First Law of Heat Conduction. In addition, Eagar calibrated what minimum temperatures were required to induce the damage observed to the materials contained in the fan. According to Eagar, the burn pattern of the plaintiff's fan indicated a fire having a heat intensity of 5 to 10 Watts /cm².^{FN3} Eagar cites D.J. ICOVE & J.D. DEHANN, FORENSIC FIRE SCIENCE RECONSTRUCTION (Prentice Hall 2004), in establishing that the most intense external fire in a building with normal combustibles is less than 2 Watts /cm².^{FN4} Eagar states in his supplemental report that the heat intensities calculated from the plaintiff's fan are consistent with the heat intensities generated by laboratory induced normal end-of-life shorting of the coil windings [Doc. No. 48, Ex. 7, at 6]. According to Eagar, the plaintiff's fan's coil burn patterns cannot be explained by attack by an external fire, but such fire patterns are fully consistent with shorted coils and internal electrical activity.^{FN5} *Id.* at 6-7.

FN3. The defendant contends that Eagar's heat intensity calculations are unreliable because he based them, in part, on a fan, the Morrill fan, that did not catch on fire. At the hearing, Eagar testified that he did initially confuse the fans in his first report, and that he recanted any conclusions he made in his first report based on the Morrill fan. He further testified that he recalculated the heat intensities based on the burn patterns observed in the plaintiff's fan, and reported these calculations in his second report.

FN4. The defendant's expert, Charles Manning, contends that the cited heat intensity levels are incorrect [Doc. No. 59, Ex. 2, at 6]. According to Manning, the flux levels cited by Eagar are onset levels, and not maximized levels, which can reach 17 Watts/cm². *Id.* Manning cites NFPA 921 § 5.5.4.2.8 for support, which states: "The onset of flashover occurs when the hot gas layer imposes radiant energy levels (flux) on un-ignited fuels of approximately 20 KW /m² (2 Watts /cm²). This flux level is usually sufficient to ignite ordinary combustible materials. Flux levels in full room involvement are considerably higher than at the beginning of flashover. Levels at the floor of 170 KW /m² (17 Watts /cm²) have been recorded."

FN5. The plaintiff points to NFPA 921, § 24.5.6.2 as acknowledging and generally accepting the premise that a motor revealing greater damage deep within the coils than on the exterior of the coils is indicative of a heat source being within the motor coil rather than outside of it. The plaintiff also points to JOHN D. DEHAAN, Ph.D., KIRK'S FIRE INVESTIGATION (5th ed.2002), pg 336-38 to support the contention that an evaluation of damage to the windings can determine if the fire origin was internal or external to the motor.

Eagar has opined that two defects were responsible for the fire. First, Eagar testified that the insulation on the windings was defective because it is not rated for temperatures that the fan is capable of reaching during operation. According to Eagar, the insulation is rated as a "Class B" insulation, suitable as an insula-

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tion on windings whose temperatures do not exceed 130° C.^{FN6} The TCO, however, is rated to cut off the fan when it reaches a temperature of 136° C. He testified that the difference in the potential operating temperature of 136° C and the insulation rating of 130° C may result in the degradation of the insulation over time, including the flaking and rubbing off of the insulation on the windings due to the vibrations produced during the running of the fan. Such degradation results in an increased potential for the shorting of the coil windings due to the separate wires making contact.^{FN7} *Id.* at 7.

^{FN6}. As support for this proposition, Eagar relies on a table from a textbook by the National Electric Manufacturer's Association, which indicates that thermoplastic polyurethane (the plastic used for the insulation of the coil wire) essentially loses all of its mechanical strength at 100° C, below the minimum operating temperature of the TCO.

^{FN7}. JOHN D. DEHAAN, Ph.D., KIRK'S FIRE INVESTIGATION (5th ed.2002), pg. 336-38 indicates that electric motors can overheat from excessive current flow, causing insulation destruction which, in the absence of proper overload protection, is capable of causing ignition.

*7 The second defect Eagar identifies in the fan is the misplacement of and/or use of an improperly rated TCO. Eagar testified that tests indicate that high temperatures sufficient to ignite a fire can occur in remote sections of the motor prior to the tripping of the TCO. According to Eagar, this occurs when non-uniform heating produces temperatures in isolated portions of the motor sufficient to start a fire before the TCO reaches a temperature of 136° C and cuts off electricity to the fan. According to Eagar, the TCO in the plaintiff's fan was not properly placed or rated to protect against non-uniform overheating. Eagar used an aluminum coil heat conduction test to demonstrate that the inside of the coil can reach temperatures sufficient to melt the bobbin of a motor and cause a fire before the outside of the coil reaches a temperature high enough to trigger the TCO. This particular test applies electricity to the inside of a aluminum winding to measure the flow of heat from the inside of the coil to the coil surface. Based on the temperature gradient across the coil over time, Eagar calculated that the

inner surface of the coil could reach a non-uniform temperature sufficient to cause a fire before the TCO reached a temperature sufficient to cut off the electricity to the motor.^{FN8}

^{FN8}. Eagar cites two additional pieces of evidence to support his contention of internal, non-uniform heating. First, Eagar cites a notch formed on the inner metal laminate of the motor core when it contacted with winding. According to Eagar, the notch was formed by an electrical arc, which is capable of generating temperatures of about 6750 C. In addition, the bobbin from the Morrill fan was melted. Nylon melts at a temperature of about 2850 C to 3700 C.

Eagar also testified that the shorting of the coil can lead to a phenomenon termed the "transformer effect." According to Eagar, the transformer effect occurs when the main coil of a motor develops shorts between turns, or between layers, and alters the characteristics of the motor, resulting in the generation of a second coil at the short. As excessive voltage flows from the main coil to the second coil, a transformer is formed, and generates intense, localized heating in the second coil. According to Eagar, the heating at the second coil is non-uniform, and capable of reaching an intensity sufficient to ignite nearby combustibles before the TCO heats up to its tripping temperature.^{FN9}

^{FN9}. During the hearing, Eagar cited NFPA 921, § 24.5.5 in support of his theory. This section indicates that in a transformer, as windings begin to short to each other, impedance drops and more current flows, causing greater heating. Accordingly, in some cases, the heated insulation around the winding or other combustibles in or on the transformer might be ignited before the electrical heating stops. DEHAAN, *supra*, also indicates that electric motors can overheat from excessive current flow, causing insulation destruction, which, in the absence of proper overload protection, is capable of causing ignition.

An expert's methodology must be consistent with the "methods and procedures of science" rather than being founded on "subjective belief or unsupported

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speculation.” *Daubert*, 509 U.S. at 592. To be reliable, the testimony “must be supported by appropriate validation-i.e., ‘good grounds,’ based on what is known.” *Daubert*, 509 U.S. at 590. In reviewing Eagar’s report and testimony at the hearing, this court finds that Eagar followed a reasonable approach to his investigation as outlined in the NFPA 921 manual. He examined the burn patterns of the fan at issue. He used known scientific principles-thermal conductivity, thermal gradients, Fourier’s First Law of Heat Conduction, the Second Law of Thermodynamics, and transformers-to calculate the heat intensities necessary to produce the observed burn patterns. He performed tests to demonstrate that these well known scientific principles applied to small fan motors. Eagar’s conclusions were based on his observations of similar types of fans that had overheated in the field and showed similar burn patterns. Although Eagar’s methodology may not be susceptible to testing or peer review, the court finds, based on the testimony at the hearing, that this type of methodology does constitute a generally acceptable practice as a method for analyzing the cause of the fire. *See Bitler*, 400 F.3d at 1235 (finding that a fire investigator that employed his experience and knowledge, observed the physical evidence, and deduced the likely cause of the fire used a reliable methodology, even though such a method is not susceptible to testing or peer review, because the methodology constituted a generally accepted practice in the field.).

*8 The defendant contends that the failure by Eagar to test an exemplary fan to verify his conclusions renders his testimony unreliable, especially with respect to the transformer effect theory. At the August 31, 2007, hearing, the court questioned Eagar regarding his lack of testing. Eagar testified that he did not perform specific tests to verify the failure mode of the subject fan motor because there are too many variables involved in the testing. Instead, he testified that he simply applied well-known scientific principles to the physical evidence and observations from the field to reach his conclusion, as is customary in the field. While the court questions whether such verifying tests would be as difficult as Eagar maintains, the court does not find that the lack of testing in this particular case renders Eagar’s opinion unreliable. *See Windham v. Circuit City Stores, Inc.*, 420 F.Supp.2d 1206, 1212 (D.Kan.2006) (“Where an expert otherwise reliably uses scientific methods to reach a conclusion, lack of independent testing may go to the weight and not the admissibility of the testimony.”).

Finally, the court is satisfied that Eagar has not relied on mere speculation in reaching his conclusions, but has applied the type of information, analyses, and methods generally relied on in his field. The information he has gathered from the examination of the burn patterns on the plaintiff’s fan, his knowledge and experience in the field, and the application of generally known scientific principles reasonably supports his conclusions that the fan caused the fire, and that the insulation and placement and/or rating of the TCO was defective. The court finds that Eagar’s testimony is sufficiently reliable and sufficiently relevant to assist the trier of fact, and is admissible under *Daubert* and *Federal Rule of Evidence 702*. Therefore, this court hereby DENIES the defendant’s motion to exclude the testimony of Dr. Thomas Eagar [Doc. No. 48].

b. *Richard Underwood*

i. *Qualifications*

The plaintiff has proffered Richard I. Underwood, P.E., to testify that the exhaust fan was the cause of the fire, and that the fan was defective because the TCO on the motor was not properly placed or rated. The defendant contends that Underwood is unqualified to render an opinion in this case because he does not have any experience in small motor design, has never been employed by or worked with a company that designs or manufactures small motors, does not know about the manufacturing process of exhaust fans, has not built a prototype of an exhaust fan, and has not performed any end-of-life testing of exhaust fans. In addition, the defendant contends that Underwood has no specialized training in placement or design of TCOs, has never performed any testing on a TCO from any type of exhaust fan, and was unaware of the properties of the TCO at issue in this case, including at what temperature the TCO would trigger.

To testify as an expert, the expert must be “competent and qualified by knowledge, skill, experience, training, or education to render the opinion.” *Sandoz Pharmaceutical Corp.*, 131 F.Supp. at 1351. Richard Underwood has a B.S. in Electrical Engineering from the University of Kentucky, and is a registered Professional Engineer. Underwood currently works at Applied Technical Services, Inc., as a forensic electrical engineer consultant that conducts

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investigations into fires suspected of having electrical or functional origins. At the August 31, 2007, hearing, Underwood testified that he has had over 30 years of experience in analyzing small electric motor failures. Over those 30 years, Underwood stated that he has investigated 40 to 50 small fan failures that resulted in fires. During the hearing, Underwood explained to the court that a TCO is a simple fail safe device that relies on basic engineering design principles to operate. According to Underwood, he has observed the placements and ratings of various TCOs on small motors in the field through his work in investigating small motor failures and the causes of fires from small motors. Based on Underwood's knowledge of, observations of, and experiences with small motors and fire investigations in the field, the court finds that Underwood is qualified to testify regarding the cause of fire and the alleged defects in the fan.

ii. *The Methodology by which the Expert Reaches his Conclusions*

*9 Underwood proffered an expert witness statement on August 7, 2003 [Doc. No. 49, Ex. 11] and a supplemental report on August 30, 2005 [Doc. No. 49, Ex. 9]. Underwood opines that the fire was caused by a malfunction of the fan motor wherein the motor windings shorted out as a result of motor overheating, leading to adjacent combustibles igniting. According to Underwood, the fan stalled due to a lack of lubrication of the fan axle, which allowed the build up of heat and caused the winding insulation to disintegrate over time. According to Underwood, the loss of insulation on the windings caused turn-to-turn shorts in the windings and resulted in localized hot spots. The loss of air flow secondary to the stalled fan blades further precipitated the localized hot spots, and dust accumulated on the fan motor and the plastic motor blades was ignited by the localized hot spots. According to Underwood, the TCO was not properly located or rated, and failed to trigger when the non-uniform, localized heating occurred at the hot spots.

The defendant contends that Underwood's methodology used and conclusions reached in his opinion are not reliable. According to the defendant, the methodology used by Underwood is flawed because he did not test any exemplary fans to verify his theory of ignition. Because Underwood did not perform any tests on his theory, the defendant contends that the error rate of Underwood's theory is unknown,

and any conclusions are the result of mere speculation. In addition, the defendant contends that Underwood's opinion does not fit with the facts of the case because his opinion is not plausible given store employee Patel's testimony that the fan was still running after the fire had occurred.

At the hearing, Underwood testified that he relied on the methodology outlined in NFPA 921. Accordingly, he examined the fan to determine if the damage to the fan was consistent with a fire. After concluding that the damage to the fan was consistent with a fire, Underwood took the fan apart and observed localized melting of the aluminum coil windings. In addition, he observed a notch found on the motor's metal laminate core. He also observed that the burn patterns on the outside of the fan housing were not consistent with a fire of external origin. Based on these observations, Underwood testified that he developed a hypothesis that the fan motor was the cause of the fire because the data was only consistent with internal fire.

According to Underwood, he then set out to test his hypothesis. He testified that localized melting of the inner aluminum coil windings was consistent with a fire of internal origin, because external fire would have melted outside windings first.^{FN10} Underwood testified that he submitted the notch on the inner core to a metallurgist, who indicated that the notch was caused by a contact with an energized wire. According to Underwood, any advancing fire from another cause would damage the fan wiring insulation from the outside and remove power long before it melted the internal bobbin spacer plastic, and allowed the winding to make contact with the metal core to form a notch. According to Underwood's supplemental report, a notch in the metal core is possible only at temperatures of approximately 1370° C, possible with electrical arcing, but not with external heating.^{FN11} The presence of the notch, according to Underwood, is an indication that the internal temperature of the fan was sufficient to melt the bobbin, which requires a temperature in excess of the 200° C, before the TCO was triggered. Underwood also examined an exemplary fan, the Morrill fan, manufactured by the defendant that was removed from an office building after it stopped working and began emitting a foul odor. According to Underwood, the Morrill fan showed evidence that the internal temperature of the fan had reached temperatures sufficient to damage the nylon bobbin and damage the insulation on the windings,

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such temperatures exceeding the triggering temperature of the TCO. Underwood testified at the hearing, however, that the TCO on the Morrill fan did not trip. Such evidence, according to Underwood, was consistent with localized, non-uniform heating that was insufficient to trip the TCO because it was improperly placed or rated to pick up nonuniform localized heating. At the hearing, Underwood also testified that he has observed in the field exhaust fans that caught fire due to dust buildup.

FN10. The plaintiff points to NFPA 921, § 24.5.6.2 as acknowledging and generally accepting the premise that a motor revealing greater damage deep within the coils than on the exterior of the coils is indicative of a heat source being within the motor coil rather than outside of it. The plaintiff also points to DEHAAN, *supra*, to support the contention that an evaluation of damage to the windings can determine if the fire origin was internal or external to the motor.

FN11. The plaintiff contends that Underwood's conclusions regarding the arc notch he observed in the metal core were essentially peer reviewed and confirmed by Dr. Michael Stevenson. Dr. Stevenson is a metallurgist who examined the notch in detail, and performed testing which showed that the notch more probably than not resulted from contact between one of the coil windings and the steel laminate core while the winding was energized.

*10 According to Underwood, based on his examination of the fan and his observations from the field, the damage observed in the plaintiff's fan is consistent with a short in the winding reaching a temperature sufficient to ignite dust buildup on the fan, prior to the tripping of the TCO. According to Underwood, the fan was defective because the TCO failed to detect the non-uniform, localized heating and prevent the fan from igniting due to improper placement and/or rating.

In reviewing Underwood's report and testimony at the hearing, this court finds that Underwood followed a reasonable approach to his investigation as outlined in the NFPA 921 manual. He examined the fan at issue, he attempted to verify the cause of the

notch in the metal core, and he examined internal heat damage to an exemplary fan whose TCO had not triggered. Underwood's conclusions were further based on his observations of similar types of fans that had overheated in the field, including from dust buildup. Although Underwood's methodology may not be susceptible to testing or peer review, the court finds, based on the testimony at the hearing, that this type of methodology does constitute a generally acceptable practice as a method for analyzing the cause of the fire. *See Bitler*, 400 F.3d at 1235.

The defendant contends that the failure by Underwood to test an exemplary fan to verify his conclusions renders his testimony unreliable, especially with respect to his dust buildup theory. At the August 31, 2007, hearing, the court questioned Underwood regarding his lack of testing. Underwood testified that he did not perform specific laboratory tests to verify the failure mode of the subject fan motor because such tests, in order to account for all of the variables, would have to be conducted with thousands of fans for thousands of hours. Instead, he testified that observations of similar events in the field validated his conclusions, and eliminated the need for any laboratory testing. While the court questions whether such verifying tests would be as difficult as Underwood maintains, the court does not find that the lack of testing in this particular case renders Underwood's opinion unreliable. *See Windham*, 420 F.Supp.2d at 1212.

The defendant also contends that Underwood's opinion is inconsistent with the factual testimony of store employee Patel, who testified that the fan was on after the fire started, and therefore unreliable. According to Underwood's testimony at the hearing, he did consider Patel's testimony, but dismissed it based on the physical evidence and Patel's statements that the fan was blowing smoke downward into the room, a physical impossibility given that the fan exhausts air from the room. Underwood stated that he believed that Patel meant to say that the power switch to the fan was on, and not the fan itself, and that Patel turned the power switch off. The court finds that the inconsistency between Underwood's opinion and Patel's testimony, does not render Underwood's opinion unreliable.

*11 Finally, the court is satisfied that Underwood has not relied on mere speculation in reaching his conclusions, but has applied the type of information,

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analyses, and methods generally relied on in his field. The information he has gathered from the examination of the plaintiff's fan and his knowledge and experience in the field reasonably supports his conclusions that the fan caused the fire, and that the placement and/or rating of the TCO was defective. The court finds that Underwood's testimony is sufficiently reliable and sufficiently relevant to assist the trier of fact, and is admissible under *Daubert* and Federal Rule of Evidence 702. Therefore, this court hereby DENIES the defendant's motion to exclude the testimony of Richard I. Underwood [Doc. No. 49].

B. Defendant's Motion for Summary Judgment

Summary judgment is proper where "the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue of material fact and the moving party is entitled to a judgment as a matter of law." *Fed.R.Civ.P.* 56(c). The moving party bears the initial burden of showing that there is no genuine issue of material fact. See *Celotex Corp. v. Catrett*, 477 U.S. 317, 323, 106 S.Ct. 2548, 91 L.Ed.2d 265 (1986). This may be accomplished by showing that the nonmoving party will be unable to establish the existence of an element essential to [the nonmoving] party's case, and on which the [nonmoving] party will bear the burden of proof at trial." *Id.* at 322.

Once the moving party has met its burden, the burden shifts to the nonmoving party to "designate specific facts showing that there is a general issue for trial." *Id.* at 324. There is a genuine issue if the combined body of evidence, viewed in the light most favorable to the nonmoving party, would allow a reasonable jury to find in the favor of the nonmoving party. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248, 106 S.Ct. 2505, 91 L.Ed.2d 202 (1986). In other words, the relevant inquiry is "whether the evidence presents a sufficient disagreement to require submission to a jury or whether it is so one-sided that one party must prevail as a matter of law." *Id.* at 251-52. The nonmovant party "must do more than simply show that there is some metaphysical doubt as to the material facts ... Where the record taken as a whole could not lead a rational trier of fact to find for the nonmoving party, there is no genuine issue for trial." *Matsushita Electrical Industrial Co. v. Zenith Radio Corp.*, 475 U.S. 574, 586-87, 106 S.Ct. 1348, 89 L.Ed.2d 538 (1986). An issue is not genuine if it is unsupported by evidence, or if it is created by evi-

dence that is "merely colorable" or is "not significantly probative." *Anderson*, 477 U.S. at 249-50. Thus, to survive a motion for summary judgment, the nonmoving party must come forward with specific evidence of every element material to that party's case so as to create a genuine issue for trial.

The court's jurisdiction lies in diversity, therefore Georgia law applies. See *Erie Railroad Co. v. Tompkins*, 304 U.S. 64, 78, 58 S.Ct. 817, 82 L.Ed. 1188, (1938). The plaintiff bases its claims on the defendant's negligent design defect, negligent manufacturing defect, and failure to warn.

1. Negligent Design Defect

*12 In order to prevail on a negligent design defect claim, the plaintiff must prove that the product is defective and that the defect was the proximate cause of the alleged injuries. *SK Hand Tool Corp. v. Lowman*, 223 Ga.App. 712, 479 S.E.2d 103, 106 (Ga.Ct.App.1996). See also, *Jones v. NordicTrack, Inc.*, 274 Ga. 115, 550 S.E.2d 101, 103 (Ga.2001). The current test the Georgia Supreme Court has supplied for determining whether a product's design specifications were partly or totally defective is the risk-utility balancing analysis.^{FN12} *Banks v. ICI Americas, Inc.*, 450 S.E.2d 651 (Ga.1994); *Ogletree v. Navistar International Transportation Corp.*, 271 Ga. 644, 522 S.E.2d 467, 469 (Ga.1999). The outcome of the risk-utility test determines whether liability should be imposed even if a defect exists. *Wheat v. Sofamor S.N.C.*, 46 F.Supp.2d 1351, 1361 (N.D.Ga.1999).

FN12. Adopting the risk-utility analysis in *Banks v. ICI Americas, Inc.*, 450 S.E.2d 651, 674 (Ga.1994), the Georgia Supreme Court declined to state definitively that the two theories (negligence and strict liability) always merge in design defect cases. In later cases, however, the court has recognized "that there is no significant distinction between negligence and strict liability for purposes of the risk-utility analysis." *Jones*, 550 S.E.2d at 103 n. 5 (citing *Ogletree v. Navistar International Transportation Corp.*, 271 Ga. 644, 522 S.E.2d 467, 469 (Ga.1999)). See also *Bryant v. Hoffmann-La Roche, Inc.*, 262 Ga.App. 401, 585 S.E.2d 723, 730 n. 5 (Ga.2003) (holding that a claim for negligent design defect "cannot be treated as a distinct theory of recovery from [a] strict

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liability claim [], as the same risk-utility analysis applies”).

In general, this balancing test weighs the risks inherent in a product design against the utility or benefit derived from the product, and whether the manufacturer's actions were reasonable in view of what it knew or could foresee at the time the product was designed. As the court explained in *Banks*:

[T]he risk-utility analysis incorporates the concept of reasonableness, i.e., whether the manufacturer acted reasonably in choosing a particular product design, given the probability and seriousness of the risk posed by the design, the usefulness of the product in that condition, and the burden on the manufacturer to take the necessary steps to eliminate the risk. When a jury decides that the risk of harm outweighs the utility of a particular design (that the product is not as safe as it should be), it is saying that in choosing the particular design and cost trade-offs, the manufacturer exposed the consumer to greater risk of danger than he should have.

Banks, 450 S.E.2d at 673. Under the risk-utility test, a product has a design defect when “the risks inherent in a product design” outweigh “the utility of the product so designed.” ^{FN13} *Id.* at 674. The essential inquiry under the risk-utility analysis is “whether the design chosen [by the manufacturer] was a reasonable one from among the feasible choices of which the manufacturer was aware or should have been aware.” *Id.*

^{FN13}. Other factors may also be relevant, including: “the usefulness of the product; the gravity and severity of the danger posed by the design; the likelihood of that danger; the avoidability of the danger; ... and the ability to eliminate danger without impairing the usefulness of the product or making it too expensive.” *Banks*, 450 S.E.2d at 675 n. 6.

Evidence of the availability of alternative designs is particularly important to the inquiry, “in that the existence and feasibility of a safer and equally efficacious design diminishes the justification for using a challenged design.” *Id.* Indeed, the *Banks* court described the availability of feasible alternative designs as “the ‘heart’ of [a] design defect case.” *Id.*; See also *Jones*, 550 S.E.2d at 103 (“The ‘heart’ of a design

defect case is the reasonableness of selecting among alternative product designs and adopting the safest feasible one.”). The appropriate analysis is whether the manufacturer failed to adopt a reasonable alternative design which would have reduced the foreseeable risk of harm presented by the product. *Jones*, 550 S.E.2d at 103 (citing *Restatement Third of Torts; Product Liability* § 2). ^{FN14}

^{FN14}. The Restatement has commented on the concept of foreseeability, stating: Most courts agree that, for the liability system to be fair and efficient, the balancing of risks and benefits in judging product design and marketing must be done in light of the knowledge of risks and risk-avoidance techniques reasonably attainable at the time of distribution. To hold a manufacturer liable for a risk that was not foreseeable when the product was marketed might foster increased manufacturer investment in safety. But such investment by definition would be a matter of guesswork ... For these reasons, Subsections (b) and (c) speak of products being defective only when risks are reasonably foreseeable.

*13 The defendant contends that summary judgment is appropriate in this case because there is no genuine issue of material fact concerning: 1) that the fan was defective in any respect; 2) that the fan caused the fire; and 3) that the defendant could have foreseen the risk that the fan would ignite as the plaintiff alleges it did. We deal with each issue separately below.

a. Alleged Defects in the Fan

The defendant contends that the plaintiff has failed to establish a genuine issue of material fact that a design defect existed in the fan. The defendant contends that the expert testimony presented by the plaintiff regarding the defect of the fan is unreliable and therefore inadmissible. The defendant contends that there is no material fact concerning this necessary element. The court, having found that the plaintiff's experts' testimony is reliable and admissible, finds that the plaintiff has established a genuine issue of material fact with respect to the existence of a defect in the fan. As discussed above, the court finds that the plaintiff has put forth sufficient evidence that the fan was defective in its design due to the use of an improperly rated insulation to coat the windings of the fan, and that the TCO used in the fan was improperly rated

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and/or improperly placed.

b. *Alleged Causation of the Fire*

The defendant contends that the undisputed eyewitness testimony the night of the fire establishes that the fan was still running after the fire started, which is inconsistent with the plaintiff's experts' theory as to how the fire started. The defendant, therefore, contends that, given the eyewitness testimony, no genuine issue of material fact exists as to the fan being the cause of the fire.

In support of this argument, the defendant cites the testimony of Dashruthbhai Patel, a store employee, who was at the store the night of the fire. According to the defendant, Patel's testimony indicates that the fan was still blowing, and still energized and running after the fire started. During his deposition, Patel was asked the following: ^{FN15}

FN15. Patel testified with the aid of an interpreter.

Q. Mr. Ghandi said that when you spoke to him, you said you saw smoke blowing from the fan; do you remember telling that to Mr. Ghandi?

A. He says yes....

Q. So you saw smoke blowing from the fan in the ceiling of the bathroom when you went back to look?

A. He says yes.

Q. Was the fan running at that time?

A. He says yes. I turned off the light and the fan.

Q. And once you turned off the fan, did the smoke stop blowing through the fan?

A. He said no, the fire already had started. And we found out later.

Q. When you turned off the switch, did the fan stop blowing?

A. Yes, the fan stopped blowing.

[Doc. No. 43, Ex. 3, at 27-28].

According to the defendant, both Underwood and Eagar testified that if the fan was still running after the fire started, then their theories regarding the start of the fire were implausible. Underwood, during his deposition, was asked the following:

*14 Q. [I]f the fan is definitely off at or near the time when you're getting ignition of even the dust-you've already told me about that, haven't you?

A. The fan is not turning. Let's say off.

Q. Okay. The fan is not turning at the time you get ignition even of the dust, correct?

A. Yes.

Q. So the fan is definitely off by the time you have a fire big enough for people outside of the service station to see it, correct?

A. Yes, that makes sense.

Q. So if the fan is on once the fire is already going so that people can see it from the outside, then it happened in a way not like you're describing, correct?

A. Well, a turning fan would not be consistent with the scenario that I presented.

[Doc. No. 43, Ex. 7, at 174-77]. Eagar, during his deposition, was asked the following:

Q. [I]f the fire occurs, as Mr. Patel said could have occurred ... [that] he went into the bathroom and turned the switch, and the fan then went off, if that is accurate, then your story of how this happened is not very likely, is it, sir?

A. If you accept his cause and origin ... I guess you can draw those conclusions....

[Doc. No. 43, Ex. 6, at 51].

The plaintiff contends that Mr. Patel's testimony that the fan was "blowing smoke from the fan" is inconsistent with the operational nature of the fan

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because the fan would not move air down into the bathroom under normal operation; rather, as an exhaust fan, the fan only moves air out of the bathroom. In addition, Eagar testified during his deposition that Patel's testimony was not consistent with the physical evidence. *Id.* at 274, 550 S.E.2d 101.

The court finds that Patel's testimony is not entirely clear as to whether the fan was turning after the fire started. Patel states at one point in his deposition that when he turned off the fan, the smoke did not stop blowing through the fan [Doc. No. 43, Ex. 3, at 28]. In the answer to the very next question, Patel indicates that when he turned off the power switch to the fan, the fan stopped blowing. *Id.* Furthermore, to the extent that Patel's testimony is that the fan was turning and blowing smoke into the room, the court finds that such testimony presents an issue as to whether such testimony is consistent with the operational nature of the fan, which is to exhaust air from the bathroom. Finally, the court finds that the plaintiff has put forth evidence, through the testimony of its two experts, that the physical evidence of the fan is consistent with the fan as the cause of the fire. In viewing the evidence in a light most favorable to the non-movant, the court finds that a genuine issue of material fact does exist as to whether the fan was running after the fire started and whether the fan was the cause of the fire.

c. Foreseeability of the Risk

The defendant further contends that the plaintiff cannot demonstrate that the alleged defects in the fan were foreseeable to the defendant at the time of manufacture. Therefore, as a matter of law, the defendant contends that the plaintiff cannot prove that the defendant defectively designed the fan. Specifically, the defendant contends that the plaintiff has failed to put forth any evidence that the defendant could have foreseen that the alleged non-uniform heating caused by the transformer effect would circumvent the TCO and result in a fire.

*15 The plaintiff cites the deposition testimony of David Wolbrink, formerly in charge of product performance for the defendant, and Elliot Duncan, the defendant's Rule 30(b)(6) witness to support its position that the defendant could foresee the risks associated with its design. Mr. Wolbrink has testified that the motors of exhaust fans are subject to end-of-life failures due to an electrical mode failure [Doc. No. 60, Ex. 13, at 162]. Wolbrink has testified that a closed

electrical failure where the circuit remains energized and a change to the coil has taken place could theoretically result in a motor generating increased heat [Doc. No. 60, Ex. 14, at 38-39]. Wolbrink has also testified that a risk of fire is associated with exhaust fan motors [Doc. No. 60, Ex. 15, at 60-62]. Elliot Duncan, the defendant's Rule 30(b)(6) witness, has testified that the defendant was aware of the transformer effect theory in small motors,^{FN16} but had not tested the theory outside of the litigation context [Doc. No. 60, Ex. 6, at 105-06]. Wolbrink has further testified that the purpose of using TCO protected motors was because they were cheaper than an impedance protected motor [Doc. No. 60, Ex. 13, at 94-95]. Wolbrink, in addition, has testified that in an electrical failure, one potential cause of the failure is that the insulation on the windings failed. *Id.* at 163, 550 S.E.2d 101.

^{FN16} Duncan testified that the defendant was familiar with the transformer effect theory because it was put forth by Eagar in litigation against the defendant "a few years ago" [Doc. No. 60, Ex. 6, at 105-06]. Eagar has testified against the defendant regarding his theory since 1996 [Doc. No. 56, Ex. 1, at 2]. Duncan testified that the fan at issue, a Nutone model 763, was first produced in 1997 [Doc. No. 48, Ex. 3, at 9].

Finally, Wolbrink has previously testified that he believed that the insulation used in the fan would deteriorate at a temperature at or over 300° C [Doc. No. 60, Ex. 16, at 58]. Comparatively, Eagar has testified that the insulation on the windings loses all of its mechanical strength at a temperature of 130° C [Doc. No. 60, Ex. 5, at 375-76]. Furthermore, Eagar has testified that the TCO was rated to trip at a higher temperature than the mechanical strength temperature rating of the insulation.

Although a very close call, in viewing the evidence in a light most favorable to the plaintiff in this case, the court finds that a reasonable jury could find that the defendant failed to adopt a reasonable alternative design, which would have reduced the foreseeable risks of harm of fire presented by the fan. A reasonable juror, from the evidence proffered by the plaintiff, could infer that the defendant: was aware that a fire hazard was associated with the end-of-life failure of its fans; was aware that one cause of end-of-life

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electrical failures resulted from the failure of the insulation on the windings; negligently chose an improperly rated material as an insulation for its windings, subjecting the fan to increased end-of-life electrical failures; was aware of the transformer effect theory in small motors, and presumably was aware from the theory that a small motor can generate localized, increased non-uniform heating of the motor; chose to use a TCO instead of an alternative safety device because the TCO was cheaper; and, negligently failed to address the risks associated with the non-uniform heating with an alternative placement or rating for the TCO. The court finds that the plaintiff has established that a genuine issue of material fact exists as to whether the defendant could foresee the risk of fire associated with its design, and failed to use a reasonable alternative design to reduce such risks. The court, therefore, DENIES the defendant's motion for summary judgment on plaintiff's design defect claim.

2. Failure to Warn

*16 In addition to its design defect claims, the plaintiff has asserted a separate failure to warn claim based upon the defendant's alleged breach of its duty to adequately warn users of the exhaust fan about the fire risks associated with its operation.^{FN17} In addition, the plaintiff alleges that the defendant breached its duty to warn when the defendant acquired knowledge, which demonstrated the existence of a significant risk of fire associated with the fan but failed to provide warnings to consumers and users of the product concerning such risk [Doc. No. 1].

^{FN17} Design defect and failure to warn claims "are separate and distinct claims arising from different duties owed by [a] manufacturer to consumers." Battersby v. Boyer, 241 Ga.App. 115, 526 S.E.2d 159, 162 (Ga.Ct.App.1999).

In failure to warn cases, the duty to warn arises whenever the manufacturer knows or reasonably should know of the danger arising from the use of its product. Hunter v. Werner Co., 258 Ga.App. 379, 574 S.E.2d 426, 431 (Ga.Ct.App.2002) (citing Chrysler Corp. v. Batten, 264 Ga. 723, 450 S.E.2d 208, 211 (Ga.1994)). A manufacturer, however, has a duty to warn of product risk only when the entity has an actual or constructive knowledge of that risk. Chrysler Corp., 450 S.E.2d at 211. An entity has constructive

knowledge of a product danger when the entity by the application of reasonable, developed human skill and foresight should have knowledge of the danger. Bishop v. Farhat, 227 Ga.App. 201, 489 S.E.2d 323, 328 (Ga.Ct.App.1997). A negligent failure to warn claim may arise "from a manufacturer's post sale knowledge acquired months, years, or even decades after the date of the first sale of the product." Chrysler Corp., 450 S.E.2d at 211.

A product manufacturer may breach its duty to warn by "failing to provide an adequate warning of the product's potential risks." See Wilson Foods Corp. v. Turner, 218 Ga.App. 74, 460 S.E.2d 532, 534 (Ga.Ct.App.1995); Rhodes v. Interstate Battery Sys., 722 F.2d 1517, 1519 (11th Cir.1984). The focus of inquiry in such a claim is whether the warning is sufficient to apprise the user of the risks associated with the use of the product. Watkins v. Motor Ford Co., 190 F.3d 1213, 1219 (11th Cir.1999). Although a warning may have the net effect of preventing an accident, that is not what is required by the law. *Id.* What is required is that a warning inform a consumer of the nature and existence of the hazard, allowing him to make a decision whether to take on the risks warned of. *Id.* (citing Wilson Foods Corp., 218 Ga.App. 74, 460 S.E.2d 532).

To prevail on a failure to warn claim, the plaintiff must point to some evidence that the defendant had a duty to warn about the dangers arising from the exhaust fan's use, either at the time of manufacture or subsequent to manufacture, because of its knowledge of such dangers arising from the alleged risk of fire inherent in the fan. Here, the plaintiff contends that the defendant was aware that there was a fire hazard associated with the end-of-life failure of its fans but failed to adequately warn consumers about the risks. According to the plaintiff, no warnings or limitations of use were provided in the information package provided with the fan indicating that continuous use of the fan increased the risk that the fan motor would electrically fail or cause a fire. In addition, the plaintiff argues that no warnings were provided to consumers regarding the potential risk of fire after such risks were demonstrated to the defendant. The plaintiff, without such a warning, used the fan according to its directions and intended use, and was proximately injured by such use when the fan caused the fire.

*17 The plaintiff cites the deposition testimony of

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the defendant's Rule 30(b)(6) witness, Elliot Duncan, in support of its contentions. A review of Duncan's testimony reveals that the defendant did not warn consumers, either at the time of manufacture or subsequently, about the risk of fire associated with the continuous use of the fan or an end-of-life electrical failure [Doc. No. 60, Ex. 6, at 84-85]. The court, having found above that the plaintiff has proffered sufficient evidence to support their contention that the fan was defectively designed and that the defective design was foreseeable, finds that the plaintiff has raised a genuine issue of material fact that the defendant's knew or should have known about the risk of fire associated with the end-of-life failures of its fans and failed to adequately warn consumers about those risks. The court hereby DENIES the defendant's motion for summary judgment on the plaintiff's failure to warn claim.

Conclusion

For the reasons discussed above, the defendant's motion to exclude the expert testimony of Dr. Thomas Eagar [Doc. Nos. 48]; defendant's motion to exclude the expert testimony of Mr. Richard Underwood [Doc. No. 49]; and the defendant's motion for summary judgment [Doc. No 43] are DENIED. The parties are hereby DIRECTED to file a proposed consolidated pretrial order ^{FN18} pursuant to Local Rule 16.4 no later than 30 days after the date of this order. All motions in limine shall be due on the same day that the proposed pretrial order is filed. Responses to motions in limine shall be due 10 days after the proposed pretrial order is filed. Reply briefs, if any, shall be due 10 days after the responses are filed.

^{FN18}. The court notes that the plaintiff also alleges a claim for negligent defective manufacture in this case. See *Rose v. Figgie International, Inc.*, 229 Ga.App. 848, 495 S.E.2d 77, 83 (Ga.Ct.App.1997) (distinguishing manufacturing and design defects). The defendant's motion for summary judgment, however, only peripherally mentions this claim. In reviewing the plaintiff's experts' reports, the court notes that the experts fail to note any deviations in the plaintiff's fan as compared to a standard Nutone Model 763 fan. The court has not been directed to any other testimony from the experts regarding the manufacturing defect. Simply alleging that a product is defective, absent

evidence of a deviation from the "perfect" or prototypical Nutone Model 763 exhaust fan, is not sufficient to demonstrate the existence of a manufacturing defect. See *Center Chemical Co. v. Parzini*, 234 Ga. 868, 218 S.E.2d 580, 582 (Ga.1975). The parties are directed to clarify the status of this claim in the proposed consolidated pretrial order.

SO ORDERED.

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